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MEMORANDUM
OFFICE OF ENGINEERING AND TECHNOLOGY

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

*Manage the spectrum
and provide technical leadership
to create new opportunities
for competitive technologies and services
for the American public.
— Mission Statement —*

Date: May 14, 1996

To: Secretary, FCC

From: Robert F. Cleveland, Office of Engineering & Technology

Subject: Ex Parte Submission
ET Docket 93-62
"Guidelines for Evaluating the Environmental Effects of Radiofrequency
Radiation"

Copies of the enclosed letter and attachment from Mr. Arthur Varanelli to Mr. Norbert Hankin of the U.S. Environmental Protection Agency, dated May 2, 1996, were sent to several individuals and offices at the FCC. As this letter is relevant to the above-referenced docket on FCC adoption of radiofrequency radiation exposure guidelines (ET Docket 93-62), please place this memorandum and enclosure in the record of this proceeding. Three copies are enclosed for your convenience.

Enclosure

RF Radiation letter of May 2, 1996, to Norbert N. Hankin, U.S. EPA

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U.S. Environmental Protection Agency:

- Carol M. Browner, Administrator
- Mary D. Nichols, Assistant Administrator
- Ramona Trovato, Director, Office of Radiation and Indoor Air
- Lawrence G. Weinstock, Director, Radiation Protection Division
- Office of the General Counsel, EPA

Federal Communications Commission:

- Reed Hunt, Chairman
- Rachelle Chong, Commissioner
- Susan Ness, Commissioner
- James Quello, Commissioner
- Richard M. Smith, Chief, Office of Engineering and Technology
- Rick Engelman, Chief, Standards Development Branch
- Robert Cleveland, Physical Scientist
- Office of the General Counsel, FCC

The President

The Vice President

Members of the Senate

Members of the House of Representatives

Other U.S. Government Departments and Agencies

Other Concerned Citizens

Members of the Press

178 Lane Road
Chester, NH 03036

May 2, 1996

Mr. Norbert N. Hankin
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Dear Mr. Hankin:

The article FCC Could Shift RF Radiation Exposure Guides for Politics appearing in the April 8, 1996, Radio Communications Report, describes the EPA involvement in the selection of RF radiation guidelines for the FCC. You are quoted as saying *"There is research that shows there's biological effects at non-thermal levels"* in support of EPA positions on RF radiation hazards.

At best, your statement *misleads* the uninformed.

Consider the following facts:

1. Since 1926, the dawn of research and speculation on RF radiation non-thermal biological effects, some have amplified those speculations to relieve the public of its money.

"-(products)- are a counterforce against low-level radiation from electromagnetic energy fields (\$12.95 to \$75.95)", "--(product)-- phase resonance reinforces the protective aura (\$159.95)", the ----- Watch for only NZ\$169.95, and the ----- Earth Force Pulse generator for NZ\$399.95 (US\$225), are some recent examples.

2. In the 70 years since 1926, not one shred of scientific evidence has surfaced that supports concern about harmful effects at low RF radiation levels.

3. The wellspring of contemporary speculation is cold war era Soviet and Eastern European "RF radiation non-thermal biological effects science". The principles of this "science" were never ratified by Soviet conventional scientific wisdom. The works of Kapitza, Lifshitz, Landau, and others of like stature did not support the principles of "non-thermal" speculations. The Soviet RF radiation expert Zolin publicly rejected acceptance of microwave radiation non-thermal effects in general. For more information, refer to V. F. Zolin, "Bioelectromagnetics in Russia", Radio Science, Vol. 30(1), pp. 255-265, Jan. - Feb. 1995.

4. In the literature, researchers claim many non-thermal effects, such as:

EmF's inhibit malignant tumors, EmF's cause cancer, magnetic field "activated" water is beneficial, effects occur only at low intensities, telepathic communication is of an electromagnetic nature, radio communication exists between cells, biological effects of natural EmF's are irreproducible, water "activated" by low frequency fields is harmful, mind control, stimulating effect on the growth and development of crop plants, insecticide properties, manipulate genes to create desirable mutations, potential weed killer, effects bacterial growth, effects coincide with solar flares and magnetic storms, suicide in humans, cardiovascular and autonomic-system alterations, increased red blood cell formation, birth of mongoloid children, cataracts, headaches, fatigue, chest pains, sexual impotence, calcium efflux, AIDS, Alzheimer's disease, miscarriages, sudden infant death syndrome, microwave/radiowave sickness, to name a few.

5. The literature also cites many mechanisms and causes of the alleged non-thermal effects, such as:

Cyclotron resonance, soliton theory, zeeman effect, molecular resonance, ionization, cybernetics, quantum atomic energy state level increases, dipole moment polarization, superconductivity, Hall effect, dipole coupling, piezoelectricity, plasma physics dynamics, Bose-Einstein condensation, atomic polarization, non-faradic electrochemical processes, Josephson junctions, differential and pulsed Zeitgebers, to name a few.

6. All the alleged harmful non-thermal RF radiation effects and their causes are "reported" in the literature, are not replicated by the scientific method, and have attributes of physical implausibility, if not impossibility.

The FCC has recently designated you, Mr. Hankin, as the United States expert on matters related to the safety of humans exposed to RF radiation.

Is the EPA position on RF radiation exposure based on one non-thermal effect, on a few, or upon all reported effects? It is important to know which you accept or reject. Your public statement without qualification confers credibility to any RF radiation effect alleged by others.

Therefore, I request an explanation from you listing and detailing the non-thermal effects forming the basis of EPA policy, their importance and relevance, and a list of the non-thermal effects that were rejected from consideration, if any, and the reasons for rejection.

I would appreciate your explanation via letter by 20 May, 1996.

As a concerned private citizen,



Arthur Varanelli

(Distribution list attached)